BOUSSINESQ PROBLEM OF PLANE MICROPOLAR ELASTICITY.

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Abstract: This paper deals with a finite element formulation and solution of the boundary value problem of a concentrated force acting on the semi-infinite micropolar solid. A stiffness matrix is derived for a flat micropolar rectangular element in a plane state and use is made of this element to solve the case of the semi-infinite micropolar solid both in a state of plane stress and plane strain. An immediate application of the plane strain case is the important practical problem of a long line load acting on a soil mass which may be simulated as a micropolar body.